

The Health Professions Data System/Center for Missouri

Weldon D. Webb
Associate Dean for Rural Health
School of Medicine
University of Missouri

Problem Statement: Appropriate planning for and assessment of health professional needs are dependent upon the availability of accurate, timely, and reliable data. Currently, Missouri has no reliable information about the practice characteristics of health professionals in the state. With a major health professional manpower shortage looming, the absence of such information threatens to thwart policy efforts seeking to expand the numbers of health professionals. Judgments are clouded about how many and which kinds of professionals and specializations should be encouraged to practice in what regions. While other states with reliable systems are using their information to guide policy, Missouri is unable to do so. Consequently, without such information, Missouri risks seriously misallocating expensive resources, confounding opportunities to improve health access and health quality, and jeopardizing economic development initiatives that are highly valued in quality health systems.

Purpose: To establish a state-of-the-art, comprehensive Health Professions Workforce Data Center for Missouri giving stakeholders the information necessary to address the shortages and maldistribution of healthcare professionals. The center will be established to assess and improve the healthcare workforce and its distribution, ultimately resulting in improved health services for all Missourians. The center will be used for planning by health centers and academic education institutions, research, policy making, and to determine supply and demand of health professionals statewide.

The quality of Missouri's future is linked to the availability of a robust health workforce. Missourians need adequate access to physicians, dentists, nurses and other health related professions to help safeguard their well-being. Moreover, the health workforce is an increasingly important segment of Missouri's regional economies and underlies our overall economic growth. The Center would track the current supply and distribution of the state's healthcare professionals and accurately predict the future demand throughout Missouri, particularly in the rural and underserved areas. This information would be extremely valuable to state legislators, health professions schools, healthcare organizations, and the public to effectively anticipate, plan for and meet the healthcare needs of all Missourians.

The state will have an integrated way to gather key health workforce data and the capacity to securely link such information so that workforce issues can be researched and policy informed. In this era of information technology, such functions can be accomplished in ways that are efficient and effective, while at the same time safeguarding the information of individual practitioners. For example, North Carolina and Iowa are two exemplary models that accomplish these functions.

Background: Currently a maldistribution of healthcare workers exists nationally and at the state level. Missouri is falling behind several states in its ability to assess the types, number, and practice locations of its own healthcare professionals. Missouri is a diverse state with differing workforce needs in central cities, suburbs and rural areas. These regional differences cut across the availability of professions and specializations. Additionally, the looming aging of the baby boom generation will have a double effect. First, an increasingly elderly population will generate increased demand for health care services. Second, the retirement of this large cohort including a big segment of the healthcare workforce threatens increasing labor shortages. Yet, Missouri has been without reliable information about its health workforce to guide policy. Missouri's system of gathering health workforce data for licensing functions is disconnected from information about practice locations and characteristics.

Scope and Methods: To address this problem, key Missouri workforce stakeholders have consulted with both North Carolina and Iowa to learn about their Health Professions Data Systems. The objective of these meetings was to determine Missouri's baseline of current work being completed regarding health workforce and to determine a path to emulate these exemplary systems to include stakeholders, funding, operations, personnel, etc. The state health professions workforce data center is envisioned as a means to answer these fiscal and programmatic questions.

The ultimate goal of a health workforce data system and center will be to sustain a health workforce that has the number, types, and distribution of health workers needed to provide quality care for Missourians. A systematic approach to collecting data and studying the health workforce also has the potential to improve health care and allocate scarce resources more effectively.

Workforce Analysis Benefits Missourians: We propose to develop a system that will allow Missouri to:

- Monitor longitudinal trends in supply and distribution of healthcare professionals
- Inform healthcare workforce policy makers and advocacy organizations (such as the Center for Health Policy and the Missouri Hospital Association)
- Inform training programs that will determine quantity and distribution of healthcare professionals
- Identify emerging healthcare workforce issues
- Challenge or substantiate anecdotal evidence
- In partnership with the University of Missouri's Center for Health Policy, identify gaps in existing data and collaborate with the Office of Social and Economic Data Analysis (OSED) and health services researchers to conduct studies to address these gaps
- Answer specific questions such as:
 1. How many practicing physicians are there in Missouri? Where are they practicing? How old are they and how long do they plan to continue practicing?
 2. Is there a shortage of nurses in the state? If so, where?

3. Will Missouri's supply of dentists keep pace with projected population growth?
4. How many health professions trained in Missouri are retained?
5. How closely does the race and ethnicity of Missouri's health professionals mirror the population?

Initial steps identified to establish a database include:

- Define roles of Department of Insurance, Financial Institutions, and Professional Registration; Department of Health and Senior Services; Department of Economic Development; OSEDA; and other stakeholders.
- Implement the requirements analysis as approved by the Board of Healing Arts for physicians and mirror this process for the other health professions.
- Determine benefits of the system's establishment to the Boards of the Department of Professions Registration.
- Determine how this initiative fits with current efforts such as Caring for Missourians
- Secure funding to create and maintain a data system

Leadership: The key to other states' success has been their ability to establish centers which maintain credibility as an unbiased, objective organization established to collect, analyze, and share data without drawing their own conclusions or setting policy. This is a crucial aspect of any model adopted by Missouri. The Office of Social and Economic Data Analysis is the suggested host of the data center. OSEDA has a record of working with large data systems, and an ongoing relationship with key players such as state government and other stakeholders. Although the data will be invaluable to policy makers and others, there is a strong consensus that the center be located in an independent setting.

Cost: The cost to start up and maintain such a center is modest and the expected return on this investment in terms of informing healthcare policy, research, health education planning, and healthcare worker recruitment and retention will be extraordinary.

Personnel (<i>salaries and benefits</i>)	\$110,000
Infrastructure (<i>hardware/software</i>)	\$50,000
Administrative (<i>copying, postage, phone, supplies</i>)	\$4,000
Publications (<i>printing, dissemination</i>)	\$25,000
Total	\$189,000

Budget Narrative:

Personnel: \$110,000

.50 FTE Project Manager: Salary \$28,970, Benefits \$8,980 Total \$37,950

This position would develop and maintain ongoing relationships with all the key constituency groups, such as the state licensure boards, professional associations, educational institutions, state government, and other constituency groups in order to make sure the interests and data needs of these groups are being communicated to the data center.

.50 FTE Database Program Analyst: Salary \$30,000, Benefits \$9,300, Total \$39,300

This position would design and administer the health professions database systems for the center. Functions would include designing database systems, ensuring data integrity, updating electronic files, building system documentation, ensuring security, managing access, allocating server capacities, communicating system capabilities and supporting users.

.50 FTE Programmer Analyst: Salary \$25,000 Benefits \$7,750, Total \$32,750

This position would construct and support web-based information systems to collect, update and communicate health professions information. Functions would include designing web-surveys, transforming database structures to facilitate analysis, writing database programs to analyze and display summary level results, integrating geographic information systems and writing web applications.

Infrastructure: \$ 50,000

Required hardware and software to facilitate the operation of the data center.

Administrative: \$ 4,000

General office supplies such as paper, postage, printer cartridges, pens, binders, tape, etc.

Publications: \$ 25,000

To fund the production and printing of an annual Missouri Health Professions Data Book and other related publications.

Key Talking Points

1. Health professions education is expensive. Recruitment of health professionals to rural areas is expensive, and so are state and community programs aimed at attracting and keeping them. How are we supposed to know how many health care providers Missouri should train if we don't know how many there are, where they are, and how likely they are to be there in a few years? Wouldn't it be better to have knowledge to anticipate problems than to try to plug holes as they develop?
2. How can the state help communities plan to ensure that they have the doctors, nurses and other health professionals they need when the state doesn't have any way of knowing who is practicing and where? By the time a community finds itself needing help, it may be months or years before crucial gaps in service can be closed with the recruitment of new doctors or nurses. The state can avoid this problem and expense through a relatively simple and inexpensive program.
3. A program to track professionals isn't some kind of high-tech dream; it's the low-tech status quo in many states, and can be created inexpensively with the cooperation of existing state agencies and universities. Legislators, researchers, health professionals, community leaders, and consumers will all have access to the same data so that everyone can understand the factors that considered in shaping public health policy.